

REMARKS

Claims 2, 4-9, 12, 19 and 20 are pending in the present application. Claims 2, 4-9, 12, 19 and 20 have been amended. Claims 1, 3, 10, 11 and 13-18 have been canceled.

The Office Action indicates that claims 6 and 12 would be allowable if rewritten to include all of the limitations of the claims from which they depend and that claims 4, 5, 19 and 20 would be allowable if amended to overcome objections and informalities and rewritten to include all of the limitations of the claims from which they depend.

Applicants respectfully request reconsideration of the application in view of the foregoing amendments and the remarks appearing below, which Applicants believe place the application in condition for allowance.

Objections to Claims for Informalities

Claim 1 stands objected to as containing an improper reference to step (b) in line 11 of claim 1 as it stood in the prior Response. The proper reference should be to step (a). Although claim 1 has been canceled, the substance of claim 1 now appears in amended claims 2 and 6. Applicants have drafted the amendments of claims 2 and 6 to address the improper reference to step b).

Claim 4 stands objected to for the phrase "the timing cycle" lacking antecedent basis. The Examiner suggests that Applicants change "the timing cycle" to --a timing cycle-- to overcome the objection. Applicants have made this change.

Claim 4 also stands objected to for the phrase "said delays" lacking antecedent basis because claim 1 refers to only one delay. Applicants have amended claim 4 to recite "said delay" instead of "said delays."

Claims 17-20 stand objected to for the phrase "said delay" lacking antecedent basis, the phrase "said late mode margin" lacking antecedent basis and the phrase "of the corresponding one of said plurality of timing paths" being unclear. Applicants note that claims 17 and 18 have been canceled. However, Applicants have amended claims 19 and 20 to provide proper antecedent basis for "said delay" and "said late mode margin." In addition, Applicants have replaced "of the corresponding one of said plurality of timing paths" with --of the timing path in which the delay element is located-- as suggested by the Examiner.

Dependent claims 2-8, 10-15 and 17-20 stand rejected for using improper antecedent basis in their preambles. Applicants note that claims 3, 4, 6, 10, 11, 13-15 and 17-20 are no

longer dependent claims. However, Applicants have amended dependent claims 2, 5, 7, 8 and 12 to recite "The" instead of "A" in their preambles.

For the foregoing reasons, Applicants respectfully request that the Examiner withdraw the present objections.

Objections to Claims Under 37 C.F.R. § 1.75

Claim 4 stands objected to under 37 C.F.R. § 1.75 as being in improper dependent form for failing to further limit the subject matter of the claim from which it depends. In particular, the Office Action states that since claim 1 fails to mention "timing cycle," the use of "the timing cycle" in claim 4 does not further limit claim 4. The Examiner suggests changing "the timing cycle" to --a timing cycle--. Applicants have made this change.

For the foregoing reasons, Applicants respectfully request that the Examiner withdraw the present objection.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 4, 5 and 16-20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention.

Regarding claims 4 and 5, the Office Action states that the phrase "corresponding late mode margin minus a fraction of the timing cycle" does not correspond to the subject matter discussed on page 15, paragraph [0027] of Applicants' specification. Applicants respectfully disagree.

Cited paragraph [0027] describes moving timing paths toward the beginning of a timing cycle by a fraction of the timing cycle. This paragraph (and FIG. 6A) also states that the original histogram is made up of the timing paths that have already be subjected to method 200. In method 200, timing paths having non-zero late mode margins are given a delay equal to the late mode margin.

In order to move a timing cycle having a delay equal to the late mode margin of that cycle toward the beginning of the cycle, one must subtract a fraction of the timing cycle. This decreases the delay, thereby moving that timing path toward the beginning of the timing cycle (to the left in FIG. 5A). Accordingly, it is Applicants' position that the present specification

supports the phrase “corresponding late mode margin minus a fraction of the timing cycle” in claim 4.

Regarding claims 16-20, the Office Action states that an essential step is omitted since claim 16 recites “in response to redistributing . . .” but does not include the step of redistributing.

Applicants have amended the claims so that they do not include the just quoted language. Therefore, the present rejection is moot.

For the foregoing reasons, Applicants respectfully request that the Examiner withdraw the present rejections under 35 U.S.C. § 112, second paragraph.

Rejection Under 35 U.S.C. § 103

Kojima et al.

Claims 1-3 and 16-18 stand rejected under 35 U.S.C. § 103 as being obvious in view of U.S. Patent Application Publication No. 2003/0014724 to Kajima et al. The Office Action states that Kajima et al. disclose all of the limitations of these claims except for the specific use of the terminology “early mode” and “late mode” as appears in the rejected claims. The Office Action then asserts that it would have been obvious to a person having ordinary skill in the art at the time of the invention that, although the terminology of the rejected claims is different from the Kojima et al. publication, the rejected claims and the Kojima et al. publication are essentially directed to the same subject matter.

Claims 1, 3 and 16-18 have been canceled. Claim 2 has been amended to include subject matter that the Examiner has indicated as being allowable. Therefore, the present rejection is moot. Consequently, Applicants respectfully request that the Examiner withdraw the present rejection.

Kojima et al. and Kovacs et al.

Claims 7-10 and 12 stand rejected under 35 U.S.C. § 103 as being obvious in view of Kajima et al., discussed above, and U.S. Patent Application Publication No. 2005/0050496 to Kovacs et al. The Office Action states that Kajima et al. disclose all of the limitations of these claims except for the removal of timing paths. The Office Action then asserts that Kovacs et al. disclose the concept of removing timing paths from a timing cycle histogram and further asserts that it would have been obvious to a person having ordinary skill in the art at the time of the invention to implement the Kovacs et al. wire removal technique in the Kojima et al. method.

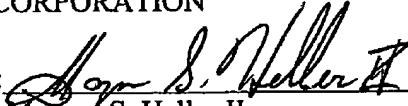
Claims 7-10 have been canceled. Claim 12 has been amended to include subject matter that the Examiner has indicated as being allowable. Therefore, the present rejection is moot. Consequently, Applicants respectfully request that the Examiner withdraw the present rejection.

CONCLUSION

In view of the foregoing, Applicants submit that claims 2, 4-9, 12, 19 and 20, as amended, are in condition for allowance. Therefore, prompt issuance of a Notice of Allowance is respectfully solicited. If any issues remain, the Examiner is encouraged to call the undersigned attorney at the number listed below.

Respectfully submitted,

INTERNATIONAL BUSINESS MACHINES
CORPORATION

By: 
Morgan S. Heller II
Registration No.: 44,756
DOWNS RACHLIN MARTIN PLLC
Tel: (802) 863-2375
Attorneys for Applicants

BTV.514533.1